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STEEL PLANTS PLEDGE IMPROVEMENTS IN 1951; "ZAPOROZHSTAL'" STEEL SHOP LAGS

/Numbers in parentheses refer to appended sources./

In January, reports from a number of metallurgical plants in the South reviewed the achievements made in 1950 and outlined plans for 1951. An industry-wide drive for better utilization of equipment in the new year met with immediate response from Southern enterprises.

Blast-furnace workers of furnace No 6 at the Magnitogorsk Metallurgical Combine have made an appeal to all workers in the combine to achieve and exceed in 1951 the best 1950 work indexes for utilization of all types of metallurgical equipment.(1) The Presidium of the Central Committee of the Trade Union of Metallurgical Industry Workers has given its approval to the appeal from Magnitogorsk. The drive will now be industry-wide, with all trade union committees in enterprises fostering it.

The Department of Wages, together with the Technical Administration of the Ministry of the Metallurgical Industry, during the first quarter 1951, will study and apply the experience of leading Stakhanovites who have achieved the best indexes in operating various types of equipment and will then disseminate their methods throughout all ferrous metallurgy enterprises.(2)

Steelworkers at the "Krasnyy Oktyabr'" Metallurgical Plant in Stalingrad have answered the Magnitogorsk appeal. Leading steelworkers in 1950 completed melts in an average of 7½ hours, whereas the other workers, working under the same conditions, had an average of 9 hours per melt. The leading steelworkers were able to maintain the checkerwork between repairs for 450-500 melts, whereas the other workers were forced to have the furnace repaired after 100-150 melts. These other workers have pledged to better their work indexes during 1951.(3)

The blooming mill shop of the Plant imeni Stalin in Stalino has responded to the appeal of the Magnitogorsk workers with a pledge to exceed the best indexes achieved in 1950 in the shop. These indexes were a productivity of 73.1 tons per hot hour as compared with the norm of 71.5 tons. In 1951, the shop's workers have pledged to achieve a productivity of 75.5 tons per hot hour.(4)

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Workers at the Metallurgical Plant imeni Dzerzhinskiy in Dneprodzerzhinsk have also responded to the appeal of the Magnitogorsk workers. In open-hearth shop No 2 (chief, Korchenko), a leading brigade, in answer to the appeal, has pledged to increase the average production of steel per square meter of hearth to 8 tons in 1951. The shop as a whole has pledged to exceed the indexes achieved at furnace No 10, which were the best for the shop in 1950.(5)

In 1950, the shop made considerable progress in increasing the durability of the furnaces between repairs and in decreasing the amount of time required for various operations. This latter achievement was due for the most part to the introduction of the process of neutralizing the metallic part of the charge. The charge is now of uniform composition: the heavy scrap from the rail shop is mixed with the same quantity of light-weight scrap from the pile-driver shop. Formerly, the metal scrap was charged into the furnace without consideration of its carbon content. Now, however, the metallic part of the charge is so made up that excess carbon is not put into the furnace. As a result, the consumption of ore in finishing the steel has been decreased and the length of this operation has been cut.(6)

A leading steelworker in the plant's open-hearth shop No 1 has made a new record for his shop with the production of 10.84 tons of steel per square meter of hearth, double the progressive norm, and completion of the melt in 3 hours 55 minutes.(5)

Nikolay Mikhaylovich Fomenko, director of the Plant imeni Dzerzhinskiy, reports that the plant has gone ahead of the prewar level in the production of metal and in the smelting of pig iron, steel, and the production of rolled products. The utilization of metallurgical equipment has considerably improved. In 1950, the recovery of steel per square meter of hearth in open-hearth shop No 2 was 3.53 tons, whereas in December 1950 it was 7.7 tons. Compared to 1949, the smelting of pig iron has increased 15 percent; steel, 79.3 percent; and rolled metal output, more than 6 percent.

In comparison with 1949, metallurgists of the Dzerzhinskiy plant have made great strides. Open-hearth, blast-furnace, and a number of rolling shops have met and exceeded the pledges adopted at the spring conference of southern and central metallurgists in Stalino. To meet the increased demands of the 1951 plan, workers will have to strive to equal not the average work indexes, but the indexes achieved by the best Stakhanovites. The plant has had a drive against overconsumption of raw materials and has had good results. In 11 months, blast furnace workers saved nearly 11,000 tons of coke.

During the postwar period, the majority of all labor-consuming operations at the plant have been mechanized and made automatic. This work will be completed in 1951. The operation of the cowpers of blast furnace No 7 is being automatized. Mechanized slag stopping devices are being installed in furnaces No 6 and No 7. The universal rolling mill will be completely mechanized and the rolling process on all the small-section mills is being mechanized by the use of guide rounds.

The plant has attached tremendous importance to increasing the quality of chrome-magnesite brick. It has been planned to increase the durability of the open-hearth roofs 100 percent. The refractories shop has found it possible to increase the temperature at which the brick is fired, thus increasing its durability 100 percent.

Blast-furnace productivity is being increased. The plant is introducing new technology in sintering, increasing the quality and output of sinter. The furnaces will thus be put on more uniform operation and their productivity will be increased. A new method of regulating the furnace is being tried out on furnace

No 8 and the air-steam blast, which intensifies the blast-furnace process, is being introduced. The neutralization of the ore used in blast-furnace smelting will be done on a wider scale and with more accuracy. New technology in the production of rail metal is being introduced now in the Bessemer shop and will provide high-quality rails. The productivity of the converters will be increased by improvements in the process of smelting the reducing agents.

A number of improvements are also under way in the open-hearth shops. The charging of molten pig iron will be done in ladles with five times the capacity of the present variety. This will help to decrease losses of pig iron by 50 percent.

Operations of the pile-driver shop are also being improved. In the 60 years of the plant's existence, thousands of tons of waste furnace scale have been dumped and will be reclaimed as scrap and used in open-hearth production. The process of breaking up and sorting the scale will be mechanized.

Many improvements will be made in the rolling shops to increase output. The metal will be rolled according to the very minimum allowances. Further modernization of the soaking pits will be carried out by the installation of recuperators, helping to increase the capacity of the pits and increasing the coefficient of heat utilization.

The plant has successfully adopted a new method of surface hardening of the parts of all metallurgical equipment. The durability of these parts has been increased 3-10 times. This is the prime factor in the decrease in the idleness of equipment for repairs. In a short time, the plant saved 5 million rubles. These measures have not yet been disseminated in southern enterprises, although they have been used successfully at the "Uralmash" Plant, Novo-Kramatorsk Plant imeni Stalin, and the Leningrad Plant imeni Kirov. The new method of hardening rollers, increasing their durability 100 percent, has also been proved successful at the plant. This method is now being improved and will give even better results.(7)

Open-hearth shop No 3 of the Plant imeni Petrovskiy in Dnepropetrovsk is responding to the appeal of the Magnitogorsk blast-furnace workers to exceed last year's work indexes in operating metallurgical equipment. In 1951, the shop has pledged to increase the length of the run of each furnace between repairs to 350 melts.

In 1950, the shop completed the year plan ahead of schedule, producing tens of thousands more tons of steel than in 1940 while using the same equipment it had in that year. The level of production planned for the last year of the Five-Year Plan was exceeded 32 percent and the established technical capacity was exceeded by 11 percent. In comparison with 1949, the shop increased steel production 17 percent. During 1950, the shop increased the interrepair run of the furnaces to 282 melts as compared with 180 in 1949 and achieved the production level estimated for furnaces of similar tonnage at the conference of steelworkers in Magnitogorsk. Far from all reserves, however, have been utilized.

In 1951, the shop will need the help of the main administrations and the Ministry of Ferrous Metallurgy in the organization of uninterrupted material and technical supply to the plant and in adopting as rapidly as possible new technology and new equipment. "Glavogneupor" (Main Administration of the Refractories Industry) must sharply improve the quality of production, particularly the quality of the roof brick and high-silica brick for the checkerwork and the Venturi throats (kesson) of open-hearth furnaces. The quality of dolomite should also be considerably improved and mass production of martenite, the new high-quality material used for dressing the furnaces, should be organized.(8)

In the plant's open-hearth shop No 1, the new progressive norm for steel production is 5.1 tons of steel per square meter of hearth. Steelworkers in this shop have pledged to increase this norm to 5.2 tons by 25 February and to complete the 2-month plan by that date.(9)

The open-hearth shop of the "Zaporozhstal'" Metallurgical Plant in Zaporozh'ye did not meet in 1950 the pledges adopted at the conference of metallurgists of the South and Center held in the spring in Stalino. Throughout the year there were very few high-speed melts in the shop, despite the fact that the shop is so equipped that any worker could smelt steel by high-speed methods. The directors of the plant and of the shop, however, have not given support to the workers who initiated the high-speed methods.

Another factor in the shop's failure to meet its norms is the inefficiency of the department of the chief mechanic (head, Gulyanitskiy) in repairing equipment. Equipment often breaks down and the shop's operations are continually marred by interruptions. Ten to 15 days have been lost in waiting for repairs. Boborykin, director of the plant, and Rozenkov, chief of the open-hearth shop, have not seen to it that the chief mechanic's department does its job.

The planning at the plant is also at fault, some days requiring extremely difficult jobs and on others very simple jobs. Thus, on some days, the shop's auxiliary equipment cannot begin to handle the great volume of production, while on other days it stands idle. The finished metal often has to be held in the furnaces, destroying its quality and injuring the furnace. There should be a plan whereby not all the furnaces are charged or emptied at the same time.

Workers in scientific research institutes are rare visitors at the plant, despite its importance in southern metallurgy. The instrument which registers the temperature of the furnace roof has not been improved and as it is now registers the temperature of only one sector of the roof. The shop could use some practical assistance in this matter, in increasing the length of the furnace run between repairs, and in other technical problems.(6)

SOURCES

1. Moscow, Trud, 16 Jan 51
2. Ibid., 17 Jan 51
3. Ibid., 18 Jan 51
4. Ibid., 24 Jan 51
5. Ibid., 9 Jan 51
6. Kiev, Pravda Ukrainy, 28 Dec 50
7. Ibid., 30 Dec 50
8. Moscow, Trud, 27 Jan 51
9. Kiev, Pravda Ukrainy, 12 Jan 51

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